WHAT IS CLAIMED IS:

1. A reagent for detecting human papilloma virus DNA in a cell sample, which indicates the patient providing the cell sample is at risk for cancer, comprising a plurality of DNA probes capable of specifically hybridizing to high-risk HPV DNA but not low-risk HPV DNA.

2. The reagent of claim 1, wherein the probes hybridize to HPV types 16, 18, 31, 33, 35, and 51, but not to HPV types 6, 11, 41, 42, 43, and 44.

3. The reagent of claim 2, wherein the probes also hybridize to HPV types 39, 45, 52, 56, 58, 59, 68, and 70.

4. The reagent of claim 1, wherein the cell sample is cervical cells taken from a patient.

5. The reagent of claim 1, wherein the DNA probes are full-length HPV probes.

6. The reagent of claim 1 consisting essentially of DNA probes to HPV types 16, 18, 31, 33, 35, and 51.

7. The reagent of claim 6, wherein each DNA probe is present in the following amounts: HPV 16 - 8.3%, HPV 18 - 20.8%, HPV 31 - 8.3%, HPV 33 - 20.8%, HPV 35 - 20.8%, and HPV 51 - 20.8%

8. A method for detecting human papilloma virus DNA in a cell sample which indicate the patient providing the cell sample is at risk for cancer comprising:

(a) adding the reagent of claim 1 under hybridization conditions, and;

(b) detecting the presence or absence of hybridization inside cells in the cell sample.

9. The method of claim 8, wherein the reagent probes hybridize to HPV types 16, 18, 31, 33, 35, and 51, but not to HPV types 6, 11, 41, 42, 43, and 44 in a cervical cell sample.

10. The method of claim 8, wherein the reagent probes also hybridize to HPV types 39, 45, 52, 56, 58, 59, 68, and 70, and low stringency hybridization conditions are used.

11. The method of claim 8 further comprising pretreating the cell sample with a protease.

12. The method of claim 8 further comprising destaining and/or deparaffining the cell sample.

13. The method of claim 8, wherein the reagent contains full-length HPV probes.

14. The method of claim 8, wherein the reagent consisting essentially of DNA probes to HPV types 16, 18, 31, 33, 35, and 51.

15. The method of claim 14, wherein the reagent contains DNA probes in the following amounts: HPV 16 - 8.3%, HPV 18 - 20.8%, HPV 31 - 8.3%, HPV 33 - 20.8%, HPV 35 - 20.8%, and HPV 51 - 20.8%

16. The method of claim 15, wherein the cell sample contains abnormal cervical cells.

17. A kit for detecting high and intermediate risk human papilloma virus DNA in a sample comprising a container containing the reagent of claim 1.

18. A kit for detecting high and intermediate risk human papilloma virus DNA in a sample comprising a container containing the reagent of claim 2.

19. A kit for detecting high and intermediate risk human papilloma virus DNA in a sample comprising a container containing the reagent of claim 3.

20. A kit for detecting high and intermediate risk human papilloma virus DNA in a sample comprising a container containing the reagent of claim 5.

21. A kit for detecting high and intermediate risk human papilloma virus DNA in a sample comprising a container containing the reagent of claim 6.

22. A kit for detecting high and intermediate risk human papilloma virus DNA in a sample comprising a container containing the reagent of claim 7.